
Adding a module to a column

The procedures in this chapter apply to adding a module to a column that is fully equipped and powered up. To add a fourth module to a column during initial system installation, see the procedure for placing the fourth module on a column in “Initial Meridian 1 installation” on page 11.

WARNING

A module containing the system CPU (common equipment cards) should never be installed at the third or the fourth tier of a column. Modules containing common equipment should always be installed in the bottom two tiers of Meridian 1 columns. This ensures optimum cooling for the common equipment cards.

A module can be added to a column in one of three positions; a procedure is given for each:

- [“Adding a module to the base of a column” on page 390](#)
- [“Adding a module between two other modules” on page 395](#)
- [“Adding a module to the top of a column” on page 401](#)

If the column is equipped with earthquake bracing, the column support rods must be removed and longer rods must be installed after the module is added. To change the rods, see “Installing earthquake bracing” on page 341.

WARNING

A fully loaded module weighs approximately 58.9 kg (130 lbs). More than one person is required to move a module.

WARNING

In a DC-powered system, power to the column can remain on during the following procedures. In an AC-powered system, however, power to the entire column *must* be shut down throughout the procedures.

Adding a module to the base of a column

If conduit or other cabling runs through modules that are being moved, you must tag and disconnect the cables, pull them out of the modules, and reroute them after all of the modules are repositioned. The top cap can remain on the module it is attached to.

- 1 Disconnect and remove the NT8D22 System Monitor for the column in the rear of the pedestal (do *not* turn off the blower unit in the front of the pedestals):

- If the column houses the master system monitor, load overlay 37 and software disable the associated SDI port:

LD 37

DIS TTY x disable the device associated with the port

- Disconnect the RJ11 cable to J3, then the cable to J6, then pull the system monitor out of the slot.

- 2 Set all circuit breakers in the rear of the pedestal to OFF (down).

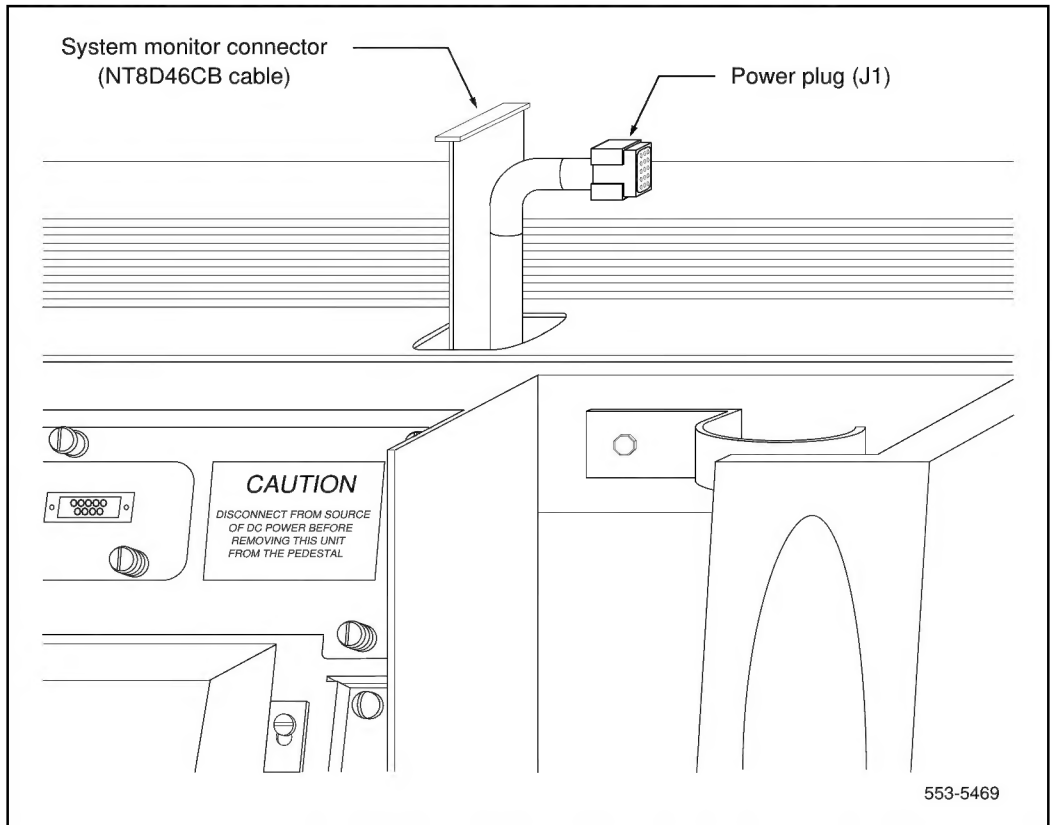
- 3 Remove the module above the pedestal:

- Disconnect the power connector to the pedestal (see [Figure 150](#)).

Note: You must press a latch trip on the front and rear of the plug. You may need to use a screwdriver blade against the latch trip on the front of the plug.

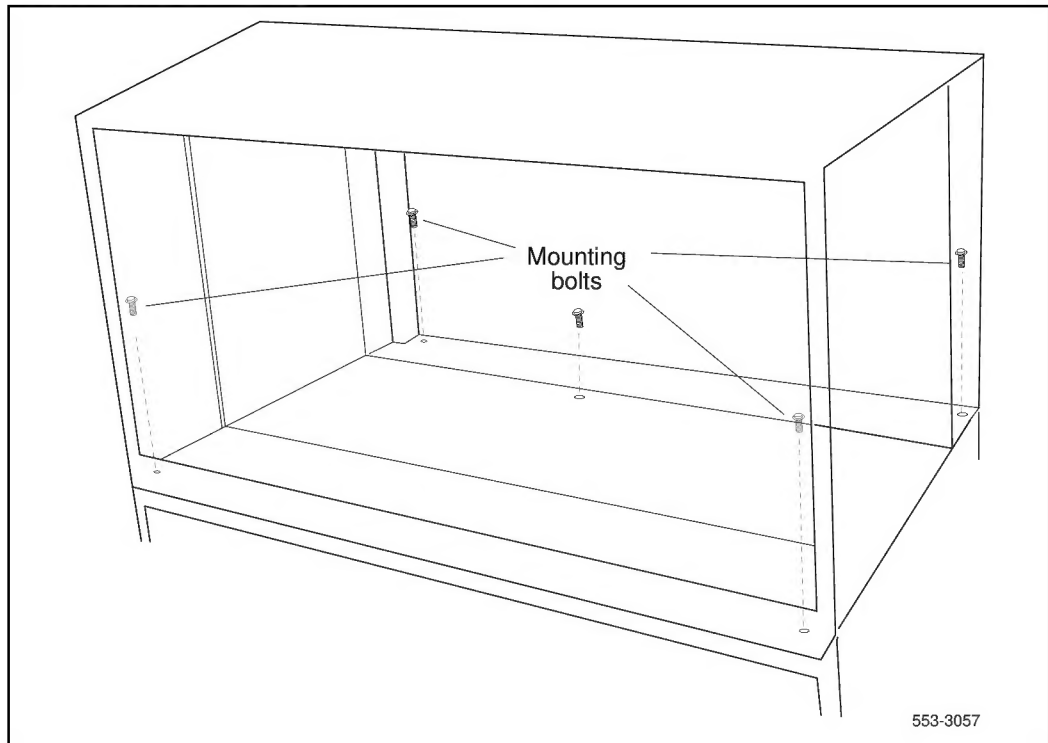
- Disconnect the system monitor connector to the pedestal (see [Figure 150](#)).
- Use a 9/16 in. socket wrench to remove the five mounting bolts that secure the module (see [Figure 151](#)) and lift it off the column.

Figure 150
NT7D09CA Pedestal—module power and system monitor connections



Note: There is an EMI shield (it looks like a brass grill) on the top of each pedestal. Leave this shield on the pedestal. Use a few pieces of tape to hold the shield in position, so the holes for the mounting bolts are aligned with the screw holes on the pedestal. After the module is secured, remove as much of the tape as possible.

Figure 151
Module mounting bolts



4 Position and secure modules:

- Locate the positioning guides on the pedestal. Make sure the module being added is facing the same direction as the column.
- Place the module being added on the pedestal and adjust it until it is seated securely on the positioning guides.
- Secure the mounting bolts for the module.
- Place the module that was removed onto the top of the module that was added and secure it with the mounting bolts.

5 Connect the power and system monitor cables in the module:

- Connect the power connectors to the pedestal and to the module above (see [Figures 150](#) and [152](#)).
- Attach the frame ground wires to the frame ground post at the base of the module.
- Connect the system monitor cable from the pedestal to connector J1 on the module being added.
- Connect the system monitor cable from connector J2 in the module being added to J1 in the module above.

6 Set all circuit breakers in the pedestal to ON.

7 Reinstall the system monitor in the pedestal:

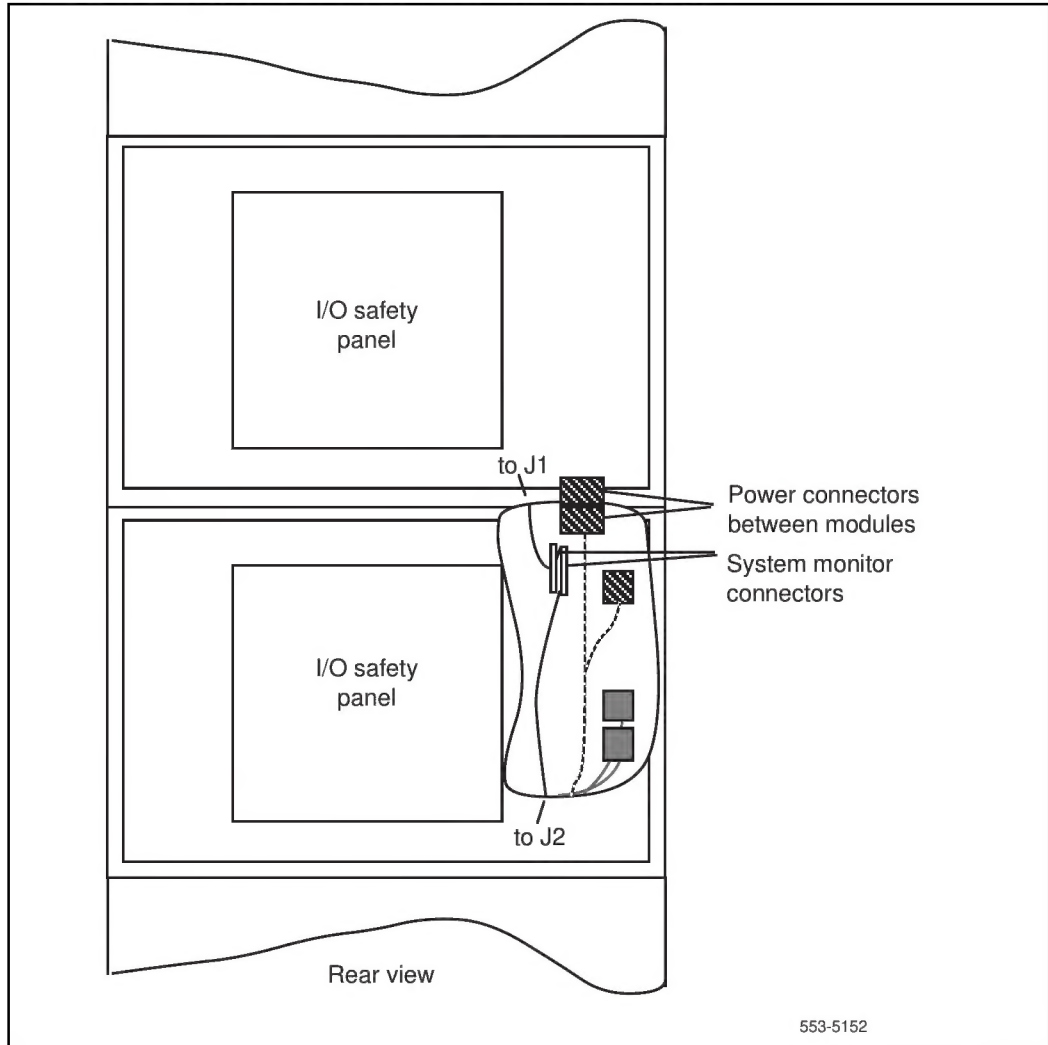
- Reconnect the RJ11 cable to J6, then the cable to J3. Reinstall the system monitor.
- If the column houses the master system monitor, load overlay 37 and software reenables the associated SDI port:

LD 37

ENL TTY x	enable the device associated with the port
****	exit LD 37

8 Replace all module covers and the pedestal grill.

Figure 152
Module-to-module power and system monitor connections



Adding a module between two other modules

If conduit or other cabling runs through modules that are being moved, you must tag and disconnect the cables, pull them out of the modules, and reroute them after all of the modules are repositioned.

The top cap can remain on the module it is attached to.

- 1 Disconnect and remove the NT8D22 System Monitor for the column in the rear of the pedestal (do *not* turn off the blower unit in the front of the pedestals):
 - If the column houses the master system monitor, load overlay 37 and software disable the associated SDI port:

LD 37
DIS TTY x disable the device associated with the port
 - Disconnect the RJ11 cable to J3, then the cable to J6, then pull the system monitor out of the slot.
- 2 Turn off power as necessary:
 - With AC power, set the main circuit breaker for the column to OFF (down) in the rear of the pedestal.

WARNING

Due to hazardous voltage in AC-powered systems, power to the entire column must be shut down. This shuts down all functions in the column.

- With DC power, set the switch on the module power supply and the circuit breaker in the rear of the pedestal to OFF (down) for any module that will be moved and for the module being added. (All other modules in the column can safely retain power.)

- 3 Remove the module that will be above the module being added:
 - Disconnect the power connectors between the modules (see [Figure 153](#)).
 - Disconnect the system monitor cable from connector J1 in the module that will be above the module being added.
 - Use a 9/16 in. socket wrench to remove the five mounting bolts that secure the module and lift it off the column (see [Figure 154](#)).
- 4 Position and secure modules:
 - Locate the positioning guides on what is now the top module in the column (see [Figure 155](#)). Make sure the module being added is facing the same direction as the column.
 - Place the module being added on top of the column and adjust it until it is seated securely on the positioning guides.
 - Secure the mounting bolts for the module.
 - Place the module that was removed on top of the module that was added and secure it with the mounting bolts.
- 5 Connect the power and system monitor cables between modules:
 - Connect the power connectors between the module being added and the modules above and below it.
 - Connect the system monitor cable from connector J2 in the module below to J1 in the module being added (see [Figure 153](#)).

Connect the system monitor cable from J2 in the module being added to J1 in the module above.
- 6 Restore power to the module:
 - With AC power, set the main circuit breaker to ON (up) in the rear of the pedestal.
 - With DC power, set the circuit breaker in the rear of the pedestal then the module power supply to ON (up) for the module that was added and for any module that was moved.

Figure 153
Module-to-module power and system monitor connections

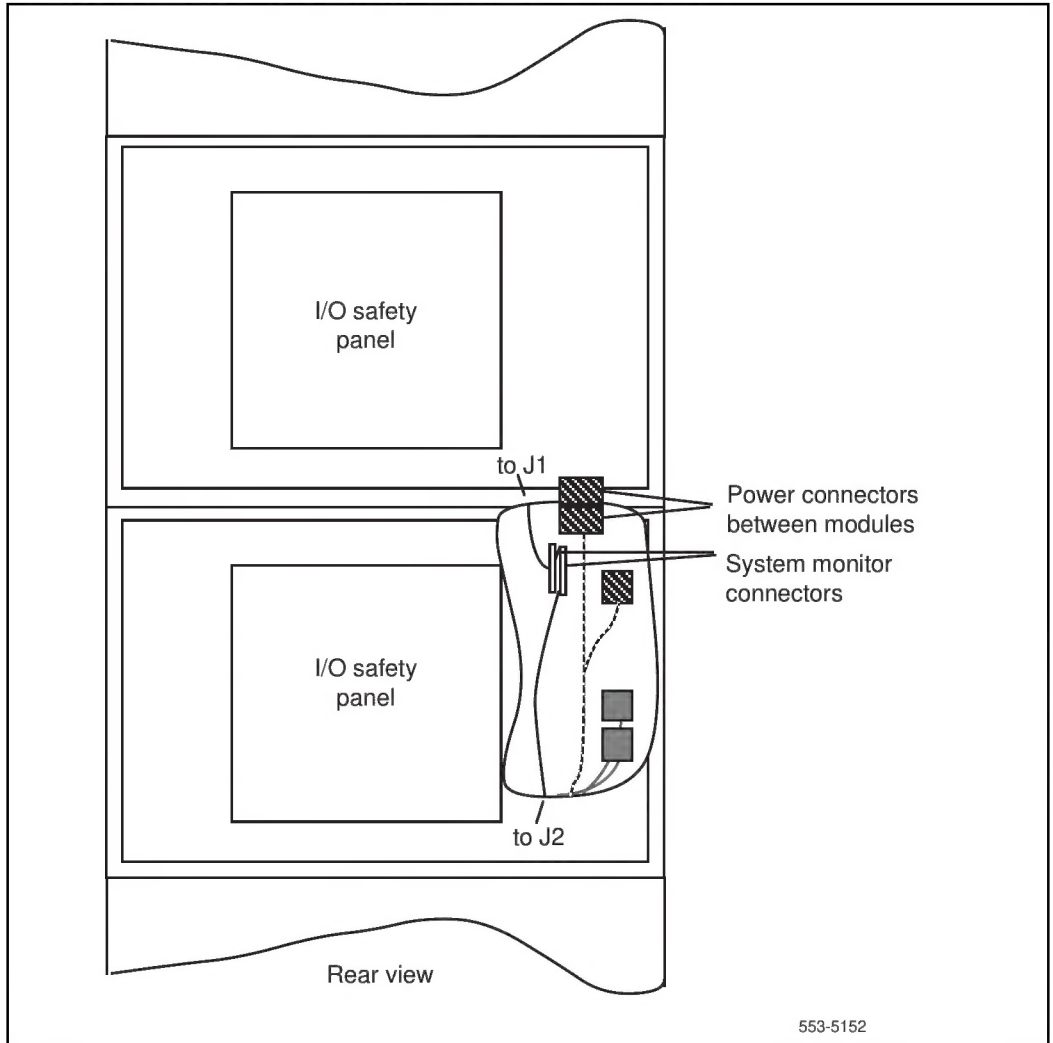


Figure 154
Module mounting bolts

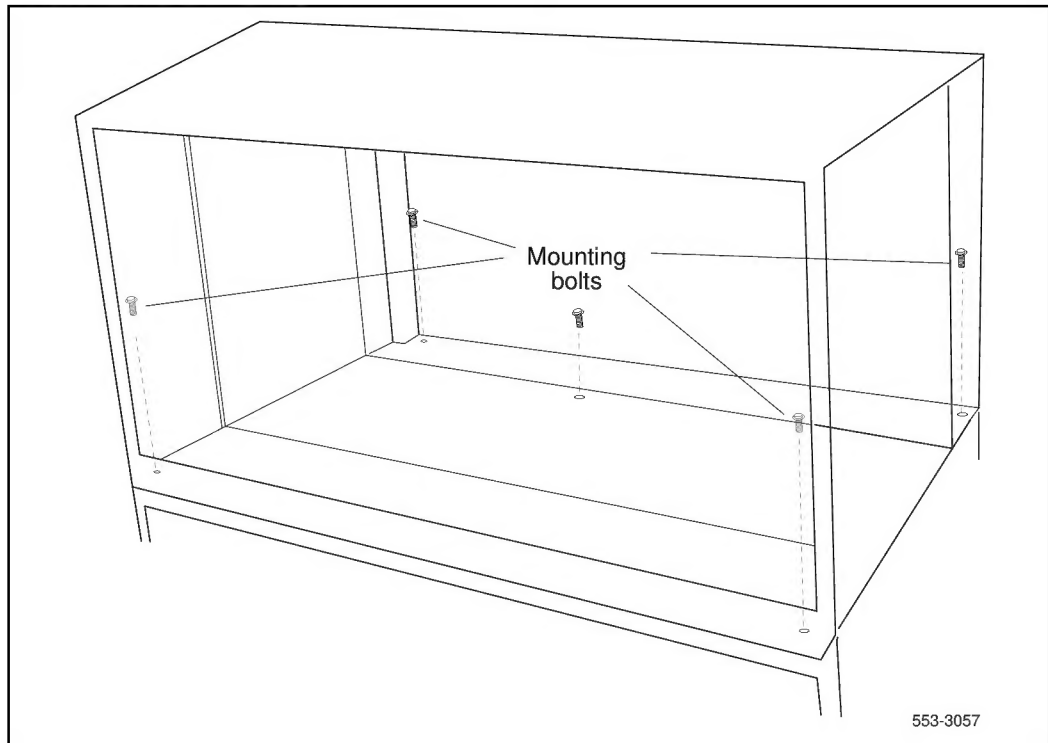
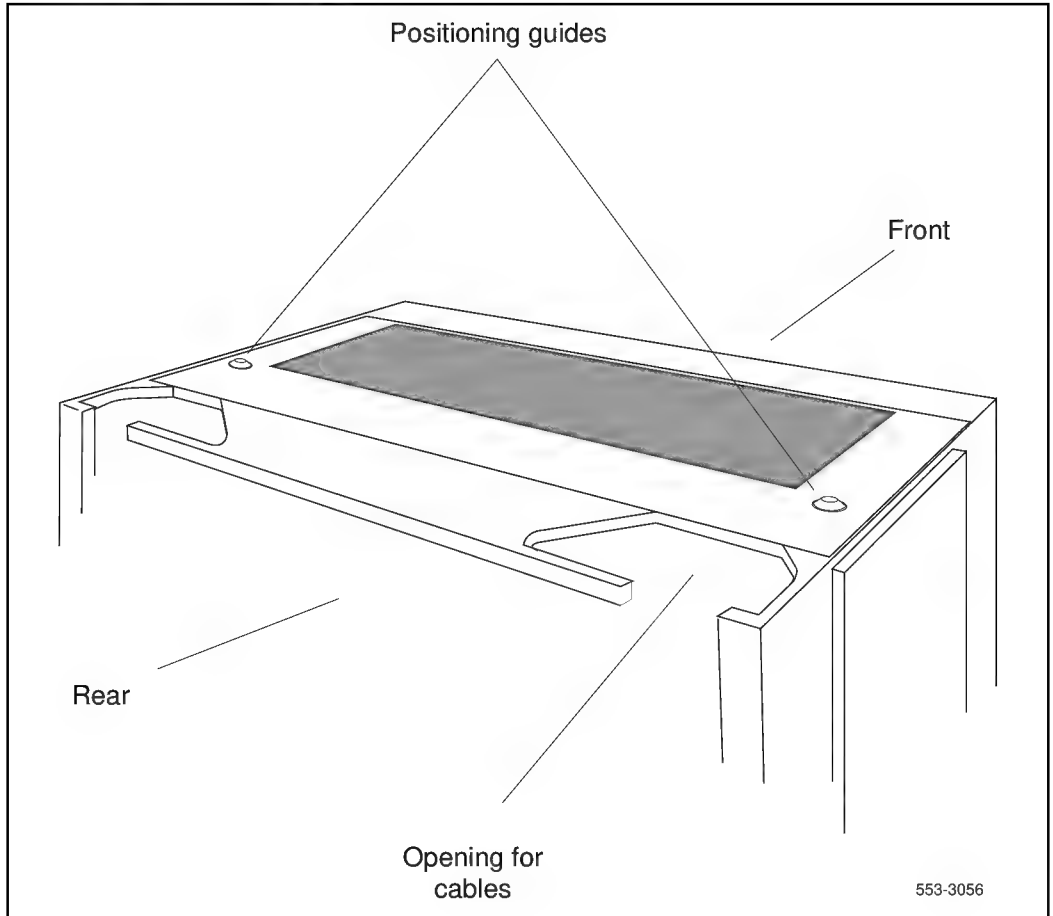


Figure 155
Module positioning guides



7 Reinstall the system monitor in the pedestal:

- Reconnect the RJ11 cable to J6, then the cable to J3. Reinstall the system monitor.
- If the column houses the master system monitor, load overlay 37 and software reenables the associated SDI port:

LD 37

```
ENL TTY x      enable the device associated with the port
****          exit LD 37
```

8 Replace all module covers and the pedestal grill.

Adding a module to the top of a column

In a DC-powered system, power to the column can remain on during this procedure.

If conduit or other cabling runs through the top cap, you must tag and disconnect the cables, pull them out of the way, and reroute them after the new module and the top cap are positioned.

- 1 Disconnect and remove the NT8D22 System Monitor for the column in the rear of the pedestal (do *not* turn off the blower unit in the front of the pedestals):

- If the column houses the master system monitor, load overlay 37 and software disable the associated SDI port:

LD 37

DIS TTY x disable the device associated with the port

- Disconnect the RJ11 cable to J3, then the cable to J6, then pull the system monitor out of the slot.
- 2 Turn off power as necessary:
 - With AC power, set the main circuit breaker for the column to OFF (down) in the rear of the pedestal.

WARNING

Due to hazardous voltage in AC-powered systems, power to the entire column must be shut down. This shuts down all functions in the column.

- With DC power, set the switch on the module power supply and the circuit breaker in the rear of the pedestal to OFF (down) for the module being added.

3 Disconnect power connections to the top cap:

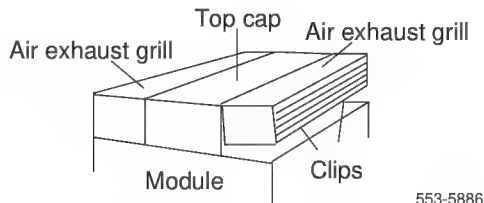
- At the top of the rear of the module, disconnect the orange power connector from the module power harness. Press the four tabs (two on each side) and let the connector fall loose into the module below.



- Disconnect the system monitor cable at connector J2 on the backplane.

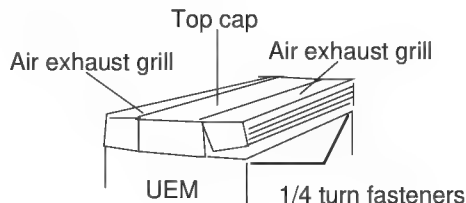
4 Remove the top cap and perforated panel:

- For countries other than the UK, pull forward on the clips underneath the front edge of each air exhaust grill on the top cap. Lift up and remove the grill.



553-5886

- In the UK, the front and rear air exhaust grills are secured by Southco fasteners located underneath the front edge of the grill. Use a #1 Phillips head screwdriver and turn the fasteners 1/4-turn to release or secure the grill.



553-7375

- Use a 5/16 in. socket wrench to remove the six bolts that secure the top cap (see [Figure 156](#)). Remove the top cap from the column.
- Remove the screw that secures the perforated panel and LED bracket. Slide the panel slightly to the left (looking at it from the rear of the column) and remove it.

5 Position and secure the module being added:

- Locate the positioning guides on the module in the column (see [Figure 157](#)). Make sure the module being added is facing the same direction as the column.
- Place the module being added on top of the column and adjust it until it is seated securely on the positioning guides.
- Use a 9/16 in. socket wrench to secure the module with five mounting bolts (see [Figure 158](#)).

Figure 156
Top cap assembly

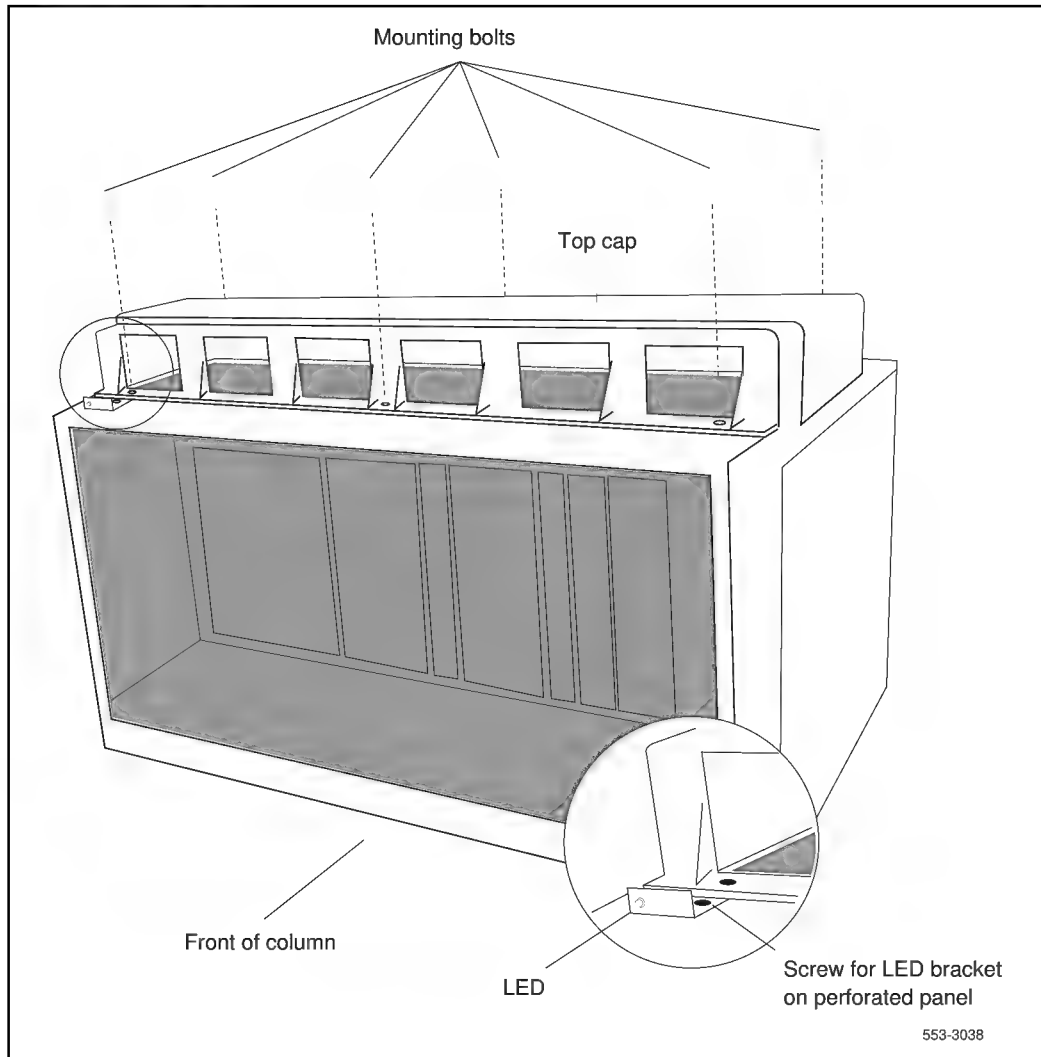


Figure 157
Module positioning guides

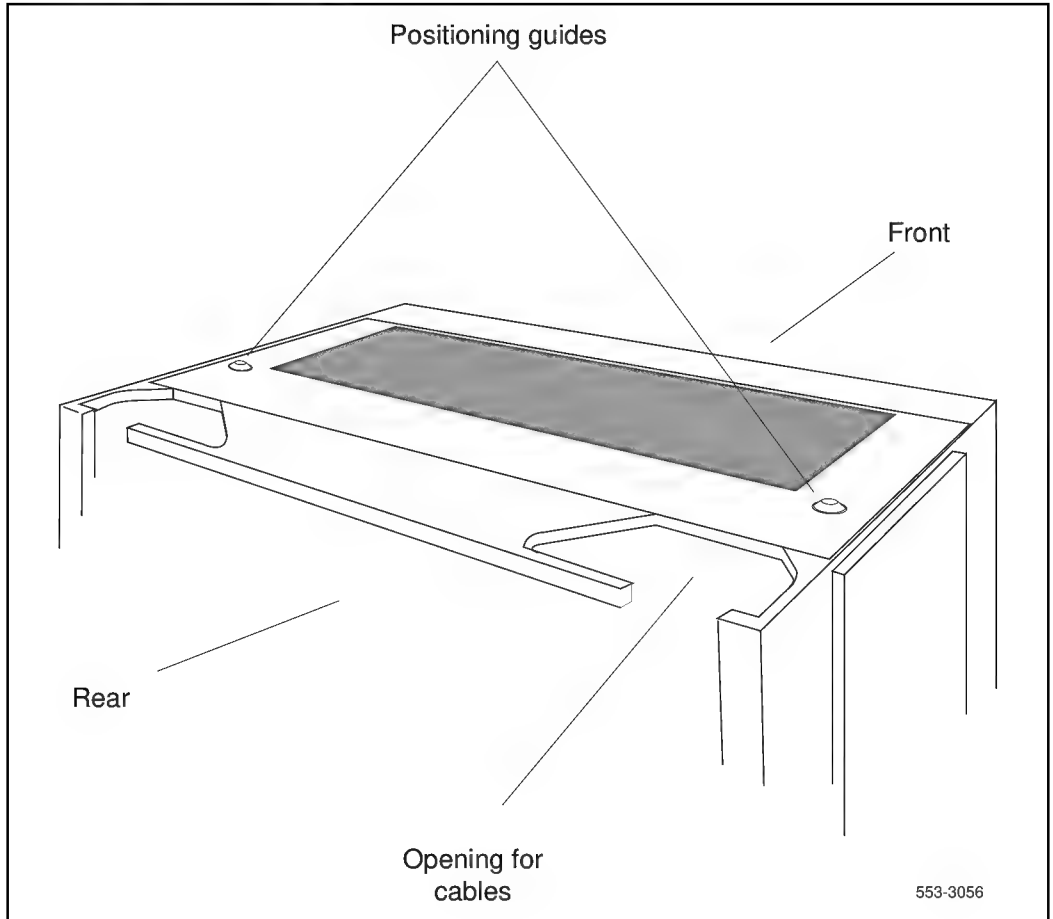
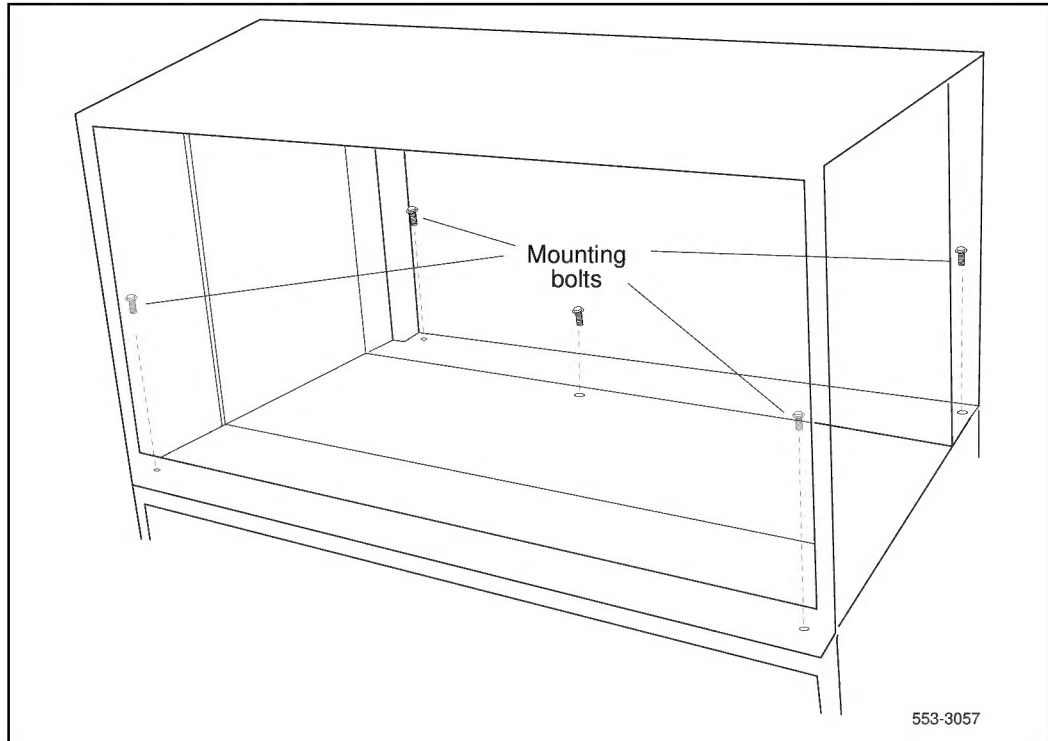
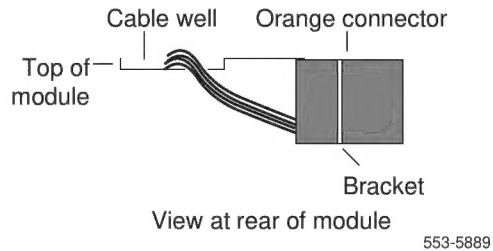


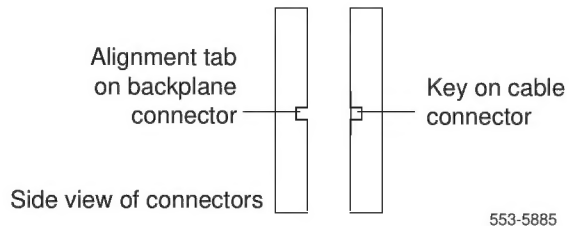
Figure 158
Module mounting bolts



- 6** Connect the power and system monitor cables between modules:
 - Connect the power connectors between the module being added and the module below it (see [Figure 159](#)).
 - Connect the system monitor cable from connector J2 in the lower module to J1 in the module being added (see [Figure 159](#)).
- 7** Install the perforated panel and top cap on the module being added:
 - Position the perforated panel and slide it slightly to the right (at the rear). Install the screw that secures the panel and LED bracket.
 - Position wiring from the perforated panel so it rests in the cable well (next to the orange power connector at the rear of the module).

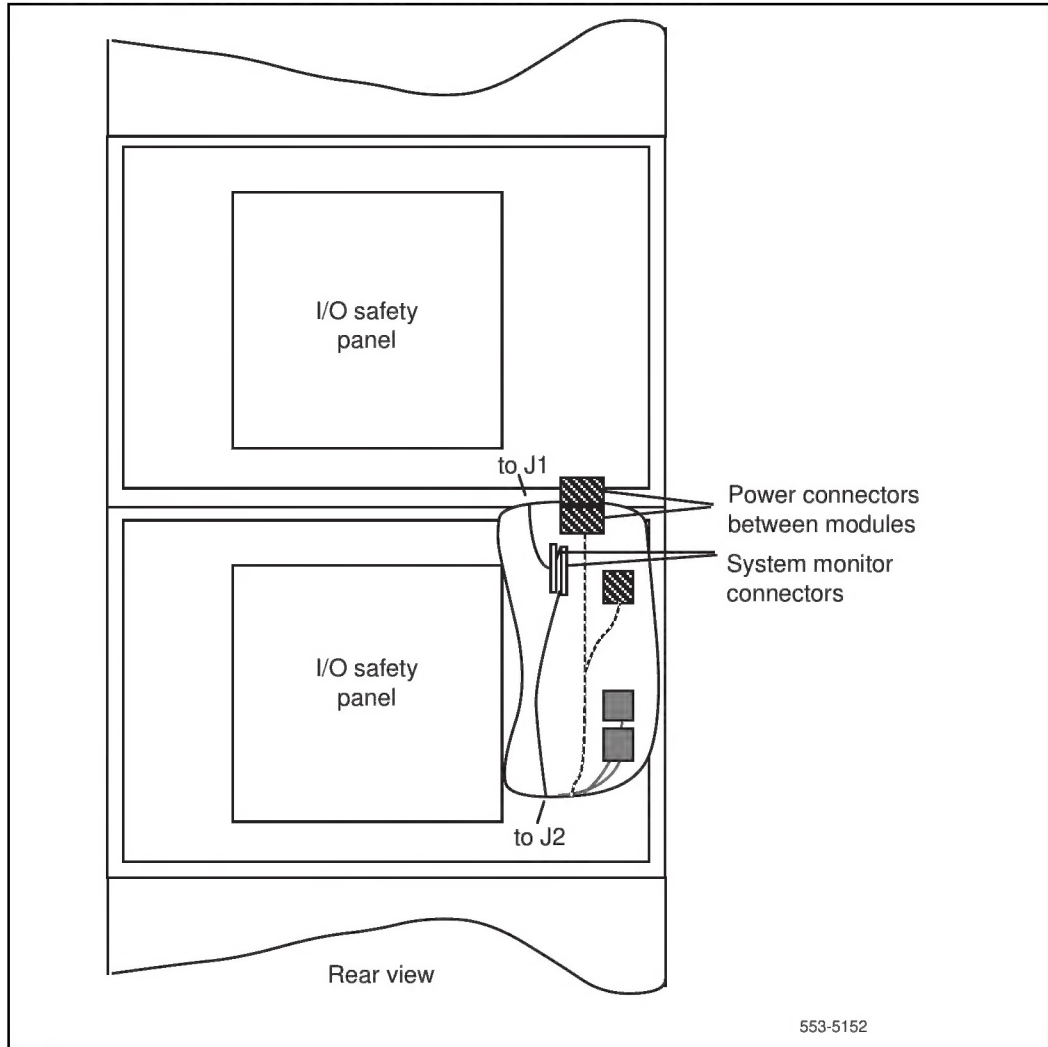


- Position the top cap and install the bolts that secure it.
 - Replace the air exhaust grills at the front and rear of the top cap.
- 8** Reconnect power to the top cap:
 - Connect the system monitor cable to J2 on the backplane. Line up the alignment tab on the connector and snap on the pin headers to position the connector correctly.



- Connect the orange power connector to the module power harness.

Figure 159
Module-to-module power and system monitor connections



9 Restore power to the module:

- With AC power, set the main circuit breaker to ON (up) in the rear of the pedestal.
- With DC power, set the circuit breaker in the rear of the pedestal and then set the module power supply to ON (up) for the module that was added.

10 Reinstall the system monitor in the pedestal:

- Reconnect the RJ11 cable to J6, then the cable to J3. Reinstall the system monitor.
- If the column houses the master system monitor, load overlay 37 and software reenables the associated SDI port:

LD 37

ENL TTY x	enable the device associated with the port
****	exit LD 37

11 Replace all module covers and the pedestal grill.